

The RARS EXCITER



Issue 249 - December, 1990 - Club Repeaters: 146.04/64 , 223.04/224.64 , & 444.5/449.5

Radio In World War 2 The End of the Story

Forty Five and one half years ago marked the end of the Second World War. For those of us who were privileged to participate in the events of those momentous times, it doesn't seem quite that long ago.

An article in the current AACS (Airways and Air Communications Service) Alumni Newsletter recounts the events of August 1945.

The two "A" bombs had been dropped. General Douglas MacArthur was named Supreme Theater Commander during this confused period. Surmising the enemy might be willing to discuss surrender, he attempted to establish communications with Japan using the War Department HF stations in Manila. These efforts were unsuccessful. His chief signal officer then called on the Manila AACS unit to try.

It was known by AACS that the Japanese were copying the un-coded weather broadcasts then being transmitted throughout the area and to China. AACS tied together 15 weather transmitters on their respective frequencies (which were all different) and broadcast a message to the Japanese Imperial Headquarters, directing them to place Japanese station JWM (Tokyo) on 13,705 KCs transmit, and for them to receive WTA (Manila) on 5,965 KCs in order to establish a radio communications channel between the two governments. All traffic was to be handled in English. AACS started transmitting on all 15 frequencies at 1708 Z, 15 Au-

gust 1945. At 1828 Z, the Imperial Japanese Army Station JQS (Tokyo) appeared on the designated frequency and established communications with US Army station WTA. Using broadcast radio, it had taken only one hour and twenty minutes to initiate the beginning of the end of hostilities, and ending the Second World War.

Fred, W4FI
Lake Monroe (FL) ARS Newsletter
C. Finnigan, Editor

RARS Christmas Party Saturday, Dec. 8th!

Mark your calendar's folks! This year's party will be hosted by Chuck, (K4HF) and MaryJo Littlewood. The party will be held at their home (2005 Quail Ridge Rd. North Raleigh, off of Falls of the Neuse Rd, just North of Millbrook Rd.), starting at 7:30 PM.

This will be a "family" party -- we're trying to locate a suitable (?) Santa. All are asked to bring a small gift (<\$5). OM's bring a gift suitable for an OM; YLs for YLs. No food to be brought. There will be holiday munchies, and a bar set up. The event is FREE to RARS MEMBERS.

The Raleigh Amateur Radio Society, Inc. (RARS), founded in 1969, has grown to be one of the premier radio clubs in North Carolina. Current membership exceeds 300.

The objectives of the club are to promote world wide friendship through Amateur Radio; to be of public service by providing radio communication in times of disaster, emergency, or civic need; to educate members in radio technique, and to assist in obtaining Amateur Radio licenses.

All persons interested in Amateur Radio, currently licensed or not, are eligible to apply for membership to the club.

Dues to the club are \$10.00 per year (which runs from July 1 to June 30). Applications for membership may be obtained from any of the officers named below; from the newsletter editor, named on the facing column; or at any RARS Meeting.

Club meetings are held the first Wednesday of every month, 7:30 PM, at the Raleigh YMCA, 1601 Hillsborough St.

In addition to the many social and special events, the club sponsors a 2 m repeater, W4DW, on 146.04/64 MHz; on 223.04 / 224.64 MHz, & 444.5 / 449.5 using the call WA4PEN. All repeaters cover Raleigh, and most of the surrounding Wake County area. Auto-patch privileges are available on W4DW to duly licensed RARS members. Future plans call for additional repeaters on the 50 MHz amateur band.

1990 Officers:

President: Jim DuBreck, N4BYO
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Raleigh, NC 27609
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Vice President: Anita Kellum, KC4AQB
208 Chatterton Drive
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The EXCITER is published monthly by the Raleigh Amateur Radio Society, and is mailed at no cost to its members.

Letters to the Editor, technical articles, items of interest to the ham community and guest editorials are actively solicited.

Any article published in the EXCITER does not necessarily represent the views of, the Officers, Board of Directors, Editor, or Society Membership, nor does publication thereof represent concurrence by the Officers, Board of Directors, Editor, or Society membership with the contents of the article.

Articles will be printed at the discretion of the Editor, and no article will be published unless it is accompanied by the name(s) of the person(s) submitting the article.

All copy must be in the hands of the editor by the end of the Board of Director's meeting on the third Wednesday of each month. Articles submitted for publication may be hand or type written, an ASCII file on disk (IBM or APPLE format), transmitted electronically via telephone modem, or on the ham bands using RTTY or PACKET.

Ham related items for sale by the members will be advertised without charge for one issue, but may be re-submitted as often as desired. These ads must be non-commercial in nature.

Commercial ads will be run in return for the following donations to the club:

	Single Issue	Full Year
Business Card	\$5.00	\$25.00
Quarter Page	\$10.00	\$50.00
Half Page	\$20.00	\$100.00
Full Page	\$30.00	\$150.00

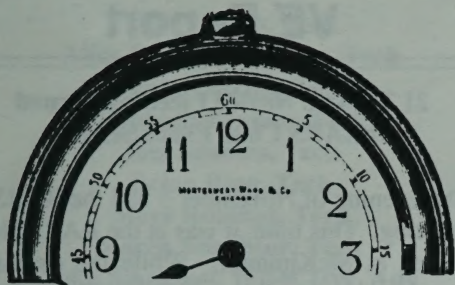
(Commercial ads must be of "camera-ready quality," and obviously can not be sent via ham bands.) Due to the reprographic process used, no color copy can be accepted.

Advertisers are guaranteed a minimum monthly mailing of 400 copies.

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Amateur Radio News Service **AMSAT**



Minutes of the Meeting

The regular monthly meeting and annual RARS Auction was held on 7 Nov 90 at the YMCA on Hillsborough Street. President Jim DuBreck, N4BYO called the meeting to order and welcomed the 93 members and 22 guests present.

Denise, N4XOY invited the YLs and XYLs to come out on the 29th of November for food and fun with the Ladies Night Out. Vice Pres Anita, KC4AQB invited all the members to the RARS Christmas Party, which will be held at K4HF's home on December 8th.

Secretary Ronnie, WA4MJF, made the gift presentation for Carla, KB4MDY, and Chuk, KB4MDZ on their second harmonic.

Fran, N4SDQ, reported that the RARS BBS should be back up this coming weekend. There had been troubles with the hard drive.

Wake County Emergency Coordinator Tom, KM4LB asked all to check the Wake Co. ARES call-up list and make any corrections that might be necessary. He said that soon the list would be divided by Fire District.

Chuck, K4HF took the podium and the elections were held. Anita Kellum, KC4AQB was re-elected Vice President; Tim Buehlmann, N4IQA was re-elected treasurer, and the chairpersons nominated at the November meeting were all returned to their positions.

Jerry, AI0K announced that Noble, N4UOQ had been appointed Assistant Emergency Coordinator. Training Director Bob Rinn, N4VQN, reported that the Novice/Tech class had just finished, and was a smashing success. The auction was held, and bargains were found by many.

*Ronald G. Reams, WA4MJF
Secretary*

Welcome New Members!

Let's give a warm RARS welcome to:

Liz Gordon, KC4UCI of Morrisville & her brother, **John Averill**. John lives in West Virginia, but here on a visit, he picked up elements 2 & 3A at the class exams. When asked why he joined, he said he liked what he saw in RARS, the class & in the newsletter!

Also, a hearty RARS welcome to the following folks who also exhibited superior intelligence, class and in-sight by joining the best radio club around!

Bernard Blackmon*, Cary
Glenn Bloodworth*, Raleigh
Bill Bressler*, Cary

Bruce Buck*, Raleigh
Marcian Bouchard, KC4QAD, Cary
Charles Brown, W4VFJ, Wake Forest
Bill Collins, WB6OTG, Wendell
Richard Crapse, KB4TKQ, Raleigh
Kenneth Eagleson*, Cary
Dick Fredenburg, KM4SX, Garner
Harry Huddleston*, Garner
John Johnson, WD4EJC, Henderson
Carl & Susan Lewis*, Cary
Kevin Littlewood, KC4THW, Raleigh
John G. Messer, K3ATM, Raleigh
Brian Ring*, Cary

Frank Scaraglino, KA2FWC, Raleigh
Robert H. Smith, KC4TVU, Middlesex
Jerry Stuckle, AI0K, Raleigh
Alfred Ward*, Garner

(* indicates tests passed, waiting for call!)

As always, we welcome you all to our humble (?) organization. The only way to really feel a part of an organization is become active within it. We hope that you will all choose to be active in the activities of RARS. Your input to the EXCITER is always welcome, and if not already doing so, please check into the club's nightly 2 meter net (8:00 PM on 146.04/64) and say hello! We all look forward to meeting and talking with you at the meetings and on the air.

Welcome to RARS!

VHF/UHF SIG Report

The regular meeting of the November VHF/UHF SIG was held on November 8th at the QTH of Ronnie and Sherry Reams.

The following RARS members were present: WA4PEN, WA4MJF, KB4EXL, KB4VYP, KC4JJZ, K4SAN, and WA4LHE.

Ed, WA4PEN, called the meeting to order. The following items were discussed: (1) The combining of the 2-METER and VHF/UHF SIG's. This

will be further discussed during later SIG meetings. (2) The selection of officers and overall SIG organization. More discussion is also planned for later SIG meetings. (3) The relocation of the 444.5 Mhz repeater and other tower/repeater locations. (4) No new information as of yet on the two potential county tower/repeater sites.

Due to the limited attendance (same night as the final Novice/Tech classes) the scheduled class on the care and feeding of ni-cad battery packs was postponed.

Following the meeting, all present enjoyed the desert that was prepared by Sherry Reams, KB4EXL.

Everyone mark your calendar on December 13th for the next VHF/UHF SIG meeting to be held at the QTH of Ronnie and Sherry Reams. SEE YOU THERE!!

Glenn Clary, WA4LHE

Homebrew SIG Report

The November 14 meeting of the Homebrew SIG was held at the home of Tom McKee, K4ZAD. Tom talked about Monolithic Microwave Integrated Circuits, and their application to ham construction projects.

The December meeting will be on Wednesday, Dec. 12th, @ 7:30 PM at the home of Walt Price, KM4BU. The program will be on solid state VHF/UHF power amplifiers, and the speaker will be Ed Alderman, WA4PEN. Walt's address is 420 Oak Ridge Rd. in Cary. Walt's phone number is 481-3856 and there will be talk in on 146.64.

Tom McKee, K4ZAD

VE Report

21 Tech; 3 Novice Licenses Earned at RARS Class Exam Session

The evening of November 5 had the RARS VE's again testing. This time, it was at the RARS Novice / Tech class at McKimmon. While the exams were open to the public, mostly, it was students from the class. Thirty six applicants in all.

A total of 100 exam elements were administered, with success rates ranging from 100% for 20 WPM (hey, one person took it, & he passed!) to 0% for Extra written (so he mostly studied code!)

A more accurate indicator for the class was **96% pass for Novice Written, 85% for 5 WPM code, and 81% for Tech written.** Those stats speak highly for the efforts of those dedicated RARS-ites who taught the class, theory and code.

RARS VE's were : John, **K4FAD**; Dave, **N4XPE**; Rob, **AB4FY**; Alan, **AB4OZ**; Chuck, **K4HF**; Steve, **AB4EL**; Joe, **WA4GIR**; Paul, **WB4YBF**; Jim, **AB4TD**; and moi, **AA4MY**. We also appreciate the assistance from Pete, **KN4OO**; and Lynn, **KC4NJB**, who graded exams and helped some handicapped applicants. We also note this was the first session that N4XPE was an examiner, instead of an applicant. Welcome aboard, Dave! Also, we appreciate the help from K4HF. In typical RARS fashion, Chuck jumped right in and lent a most welcome assist.

We congratulate:

Marion Barbour, Novice
Bernard Blackmon, Tech
Glenn Bloodworth, Tech
Bill Bressler, Tech
Bruce Buck, Tech
Ottis Cowper, Tech
Earl Crockett, Novice
Ken Eagleson, Tech
Liz Gordon, Tech
Harry Huddleston, Tech
Susan Lewis, Tech
Alan Massengill, Tech
Sonya Massengill, Tech

"Del" Mays, Tech
 Alice Oviatt-Lawrence, Tech
 Henry Patrick, Tech
 Deborah Reames, Tech
 Joel Reames, Tech
 Brian Ring, Tech
 Steve Robbins, Tech
 Karen Shakhtur, Tech
 John Singleton, WB4CDW, Adv
 Margaret Slipsager, Novice
 Fred Slipsager, KC4CPX, Gen.
 Douglas Sweet, Tech &
 Curt Williams, Tech

Also congrats to Joseph "Bailey" Watkins, KC4QNN; and Bob Rinn, N4VQN for picking up element 3B (General Written). Both of these gents will be sure to complete their upgrades another day, as did several other examinees.

'Twas also good to see more husband/wife couples earning their licenses. More feature "Families of RARS" articles ...!

All in all, it was another excellent exam session. Within just a little over one calendar month, (exams in Benson, Smithfield, and the McKimmon Center) the RARS VEs tested over 100 applicants, with close to 250 exam elements. We're not through yet! **Next Exams at the December RARS meeting.** Hope to see you there!! (And while I won't speak for the other RARS VEs, I'm looking forward to taking the month of January off!

FCC Releases New Form 610!

It's only been one year since the "current" 610 expired. I won't even guess how many times I've explained to folks "... yeah I know it sez 'Expires 12/89', but believe me, it's still good...!"

Well, fellow tax payers, the long awaited new form 610 has arrived! I wish, I could say it was worth waiting for. Yeah, some of the boxes we VE's have to write in are a little bigger, and you are now prompted with "Month/Day/Year" in the 'Date of Birth' box. But thats about it, as far as the changes go.

The new ones "expire" 12/31/92, but they'll still accept the "old ones" (exp 12/31/89) indefinitely.

Illegal Saudi Operations

Air Force Security at Headquarters, Air Force Communications command has reported that a station allegedly using the callsigns AB82H and AB82N has been running phone patches within the U.S. in violation of international law governing third party traffic.

Operation has been reported in the area of 14.197 MHz.

Since no third party traffic agreement exists between the host country and the U.S., any callsign from that region asking for help with message or phone patch traffic should be viewed with suspicion.

W6AXM
via Ham News Outlet, 10/90

"And Thats the Way It Is"

Who can forget that immortal TV sign-off line, spoken by what was the voice of CBS-TV in New York City.

When on the ham bands, keep an ear tuned for **KB2GSD**, the call issued to **Walter Cronkite**.

HamNews Outlet, 10/90

December Meeting: Public Service

Jim Mulligan, N4ODA & Edward Breeden, N4SSU will be the guest speakers at the December meeting. Their topic will be Amateur Radio & Public Service. They will present slides showing area hams in action. This should be a very informative meeting. Hope to see you there!

Anita Kellum, KC4AQB

Merry Christmas to All from the Officers & Directors of RARS!

RARS Congratulates:

Carla (KB4MDY) & Chuk (KB4MDZ) Gleason on the birth of their second daughter, Emily Rose. It was taking so long, some thought it was psycho-se-matic. But as the saying goes, the best things in life are worth waiting for. Baby & Mom are doing fine, but we have our doubts about Chuk. (I still think Chuk shud hand out HT's instead of cigars ...) Congrats to the Gleason's!

Congrats to **Andy Blalock, N4SSX**, on his recent upgrade to Extra! Andy sez his major motivation for the license was to become a Volunteer Examiner, and Andy, we're glad to have you!

Also congrats to **Dr. Roger Woodbury**, ex KC4NMT, on his new **Advanced** license & call: **KN4TR**.

Ditto to **General Class Robert Smith, KC4TVU**. You'll recall "Smitty" earned his **Novice** license with **20 WPM** & a typewriter. Well, his license arrived showing **NOVICE** class, but he's **upgraded twice** in the meantime! We understand he's on the air with a **HW-9**, running **QRP** on **CW**, and he's looking to go for **Advanced** & **Extra** soon! At 60 years young, this gent is an inspiration to us all!

Let's not forget **John Fish, N4SHX**. He's been trying for some time to get that 13 wpm out of the way. He did it, and is now signing /AG. Congrats are definitely in order!

Also congrats are in order to **Lynn Pitegoff, KC4NJB**, who has gotten the **EXCITER** accepted by the NC Council for the Blind as a publication committed to audio tape. And while we're on the subject of Lynn, it should be known that she single-handedly set up the "Ham Helpers" to help graduates of the recent RARS Novice/Tech class. It was a much needed addition to the RARS class effort. Lynn is to be congratulated for realizing the need, and more so, for doing something about it! Lynn has been reading the **EXCITER** onto tape for over a year now, was also heavily involved with our recent picnic, has never missed a session of the Novice / Tech class, helps out in the exams, and currently is working on Operation Santa. This little lady, who at first seemed to be so easy going, has really turned out to be quite a dynamo within RARS. We in RARS are lucky to have people

like Lynn working for OUR good!! Next time you hear **KC4NJB**, be sure to say "Thank you!"

And while you're passing out kudo's for a job well done, lets not forget:

Chuk Gleason, KB4MDZ;

Alan Pitegoff, AB4OZ;

Frank Scaraglino, KA2FWC; &

Ed Alderman, WA4PEN.

These gents are (and have been) spending a considerable amount of time at the bench, and up at the repeater sites (2 meter & 440) making sure that everything is running smoothly. A job well done, guys -- and appreciated by all!

Last and definately not least, congrats to the organizers and instructors of the Fall '90 Novice/Tech class. **Bob Rinn, N4VQN; Jim DuBreck, N4BYO; John Mentha, K4FAD; Dave Hyte, N4XPE;** and **ALL** the RARS instructors did a fantastic job in introducing yet another gaggle of fledgling hams on the air. Once again, congrats on another job well done!

Vince Yakamavich, AA4MY

Amateur License Exams \$5.25 in 1991

The FCC announced on October 31 that effective **Jan 1, 1991**, the maximum allowable reimbursement fee for an amateur operator license examination will be \$5.27, up from the current \$4.95. This is based upon a 6.2% increase in the Dept. of Labor Consumer Price Index between Sept. 1989 and Sept. 1990.

VEs and Volunteer Examiner Coordinators (VEC's) may charge examinees for out of pocket expenses incurred in preparing, processing, and administering examinations for Technician, General, Advanced and Amateur Extra Class operator licenses. There is no fee for Novice examinations.

The initial expense reimbursement amount was set in 1984 at \$4.00, and is tied by regulation to the Consumer Price Index.

The ARRL and W5YI VEC will both be charging **\$5.25** as the test fee for 1991. **Upgrade in December, and avoid the increase!**

*W5YI Report
11/15/90*

MAKING ANTENNAS PLAY

by Steve Modena, AB4EL

Designing a Current Balun

This article discusses the design of an air-core choke balun useful for preventing or reducing radiation from the outer braid of a coaxial transmission line. I am prompted to reveal this secret art because several people have asked "how many turns of coax should I coil up near the antenna feed point" to make a choke balun. The following scenario will not answer the question directly, but will give you enough information to figure the answer out by yourself.

I have a vertical dipole cut (nominally) to 7.2335 MHz ($492 \times 0.95 / 7.2335$). It is fed with 300 ohm twinlead that is 1/2-wavelength long electrically ($492 \times 0.80 / 7.2335$). [If you don't understand the numbers, you haven't been keeping up with my article series.] The twinlead is a mismatch to the antenna and the theoretical SWR is about 4:1, but it doesn't matter because: 1) I use low loss twinlead and 2) the apparent impedance at the end of the transmission line will be the same as at the antenna terminals on 7.2335 MHz (about 50 ohms resistive). To complete the run to my transmitter's trans-match, I use 1/2-wavelength of RG-59 mini-foam ($0.79 \times 492 / 7.2335 = 53.73$ feet) with a STRANDED center conductor.

At the point where the twinlead is connected to the RG-59, I need to coil up the coax into a current-type choke balun, ie. wind it on a piece of 4" PVC drain pipe. This is how I calculated the dimensions of the coil. I assumed that for a 50 ohm feedpoint, one should use AT LEAST 10-times that as an rf choke impedance, ie. 500 ohms minimum. But 50 ohms is the value when the antenna is resonant. If it is operated at 7.0 MHz, the impedance is somewhat higher than 50 ohms, perhaps 150 to 200 ohms. Remember, we are talking rf impedances here, NOT the characteristic impedance of the pieces of transmission lines used. The 300 ohm twin lead REPEATS its input impedance EVERY 1/2-wavelength (forget the 300 ohm value!). Now my target choke impedance is

2000 ohms!

$$\text{Inductive Impedance} = 2 \times \text{PI} \times \text{Freq} \times \text{L}$$

So, 2000 ohms = $2 \times 3.14 \times 7,233,500 \times \text{L}$ (the assumption of the Amateur licensing procedure is that you can rearrange that formula to solve for "L" or inductance in Henries). The result: 44 microHenries of inductance required.

We know these facts: the needed inductance (L) is 44 uH; the coil diameter (D) will be 4-3/8" (using 4" PVC drain pipe); RG-59 mini has a close-wound pitch of 4 turns-per-inch; the coil will be single layer and whatever length is needed. We need to know the total number of turns: N.

Now we use the formula from the ARRL Handbook: $L = (D \times D \times N \times N) / ([18 \times D] + [40 \times L])$. Notice that for our approach the formula is convoluted: the length of the coil is dependent on the total number of turns. NOTICE that I am NOT using the version of the formula that directly calculates the number of turns. The trick is to use an iterative approach. If I ASSUME a coil of 4 turns of RG-59, then the winding length will be 1 inch and the formula yields: 2.6 microHenries. Eight turns yields 7.7 microHenries; 16 turns, 15.4 microHenries; 32 turns, 49.2 microHenries. On target! That's a heavy coil, requiring about 37 feet of coax (can you calculate that?).

I use the 40 meter dipole on 15 meters. Thus, this same current choke must also work on 21 MHz. For reasons to do with parasitics (self resonance of the coil of coax), I chose to compromise and wind 24 close-spaced turns. This yields a choke inductance of about 34 microHenries with a reactance (impedance) of 1550 ohms @ 7.2335 MHz and 4535 ohms @ 14.225 Mhz -- good enough!

The above exposition should be enough for you to figure out how much coax to coil up on 14 MHz, and above, to make an effective choke balun. In the next installment I will present details on a few things I skipped over, such as verifying that the coil formula is accurate enough to apply to windings of coax; why parasitic resonances are important and how to detect them with a dip meter; why I can position the choke so far from the antenna; and maybe even present a drawing of my final setup. In the meantime, hold the place with your finger until we come back.

EMERGENCY PREPAREDNESS

by
Paul Mueller - K9PM

[Editor's Note: Reading some of the ham "rags," I am continuously amazed by the articles focusing on pot-bellied ham's carrying HT's who claim to be experts on "emergency preparedness." I wonder what would happen if these so called experts were called upon to work in a real emergency... Several years ago, a call went out here in Raleigh for hams to be airlifted (via Nat'l Guard helicopters) to the hurricane ravaged Outer-Banks. Your mission: establish VHF and HF radio communications. The challenge: you must be **totally** self sufficient for a minimum of 48 hours. (No electricity, gasoline, food, water, etc. was available. Shelter was almost non-existent. Most of the island was under 4 inches of water.) 'Choppers will be leaving RDU in 4 hours. Could YOU do it?!! I know I couldn't -- but then, I make no unrealistic claims about my state of preparedness, either!

In this article by K9PM, some of the more sobering aspects of true disaster preparedness are discussed. While admittedly somewhat "light" in terms of amateur radio content, the article makes for some very educational reading.]

Ask RARS member Bob Keys, NA4G, about his experience with disaster. He knows first hand. Two years ago a savage twister tore through his family's home in the middle of the night, almost completely destroying it. Miraculously, no one was killed but the family members' lives were totally disrupted for over a year.

Disasters of varying magnitude happen all the time -- tornados, hurricanes, earthquakes, thunderstorms, airline crashes, fires, collapsed bridges, extended power outages, truck strikes, train wrecks, toxic gas leaks, Middle East wars, economic recessions, and more -- causing financial ruin and misery to countless people. As amateur radio operators, we are more exposed to emergencies than the average person because of the nature of our hobby. We monitor or

check into nets, we pass traffic, we provide communications assistance in disasters. We participate in Field Day and other kinds of events to prepare ourselves. As a result, we probably tend to think of ourselves as being well prepared for just about anything. But are we really?

What would you do if you suddenly found yourself unemployed? What would you do if your house burned down? What would you do if there were a sudden ice and snow storm that crippled the city for a week and you couldn't get to the stores which were empty anyway? What would you do if you woke up to find that there was no electricity, no phone service, no city supplied water, no food at the grocery store, no gas at the gas station, no banks open -- or worse? Impossible? Remember Hurricane Hugo? Remember the Outer Banks a month ago? Remember the 1988 tornado in Raleigh? The point is, an emergency situation or a disaster can happen unexpectedly to anyone, and we won't be able to help others if we weren't prepared ourselves in the first place!

The purpose of this column is to enable you and your family to be better prepared for emergency situations of all kinds -- whether they are major catastrophes or minor inconveniences. However, I won't always talk about Preparedness in the context of amateur radio. While ham radio plays an integral part in Preparedness, it is only one element of a well integrated program. But I promise to keep a ham's perspective and provide a compendium of radio-related Preparedness information over time. In this first article I will list the basic elements of emergency preparedness and then devote the rest of the article to just one of the elements. This will enable you to get started on your own individual preparedness program. I'll also refer you to other sources which I have found helpful. I'll focus on different aspects of Preparedness in future articles.

If any of you have ideas, comments, questions or experiences that you would like to share, please send them to me. Those of you with computers and modems can contact me via the RARS BBS or the K4IWW BBS. Also, my address and phone number are in the roster, so feel free to contact me there. I'm not on the 64 repeater as often as I'd like, but sometimes I check in to the 8 PM net. Feel free to call me!

THE FOUNDATION

The foundation of a solid Emergency Preparedness program includes the following elements -- Insurance; a Home Inventory; Food; Water; Sanitation; Shelter; First Aid; Communication; Lighting; Heating; Cooking; Clothing; Financial Security; and Other. I'll complete this article with a discussion of Insurance and continue with another topic next month.

THE BASE OF YOUR FOUNDATION

At the base of the foundation of a good Preparedness program is adequate insurance. No, I don't sell it and I can't tell you who does. But there have been times in my life when I wished I had the kind I needed, and there have been many times I was glad I had it. I'll never forget the horrible automobile crash that Sage and I were in the night before we were married. While the accident wasn't our fault, we were later sued for \$50,000 more than our automobile liability policy covered. I can't tell you how much emotional distress that caused us for many months. While the plaintiff never collected a dime, we learned our lesson. We immediately increased our liability insurance to protect us in the future. It was a cheap lesson.

There are several kinds of insurance you should have if you are to be prepared for most types of emergencies. These include Personal Property, Life, Health, Disability, Auto and Liability insurance. Let's start with Property insurance. This is a MUST HAVE unless (a) money is no object; (b) your life's goal is to become a street person. If you own a home, you need insurance to cover the loss of the structure, and whether you own or rent, you need to insure your belongings. Get what's called "full replacement" insurance. You may think that furniture you bought 10 years ago is worth zip, but what if you had to replace it all at today's prices? The same goes for everything in your house or apartment. What about your ham gear? Make sure your policy covers it at full replacement. If it doesn't, consider getting the ARRL policy (through Albert H. Wohlers & Co., 1-800-323-2106). It costs about \$1.25 per \$100 of coverage, and it's well worth it. Make sure you know exactly what is covered and what is not covered by your policy. Many people

suffered severe financial setbacks in the '88 tornado in Raleigh, as did many of the survivors of Hurricane Hugo, because their policies didn't cover the removal of downed trees, or they didn't have full replacement coverage, or they had let their policies expire!

Next, let's talk about medical insurance. If you are employed by a big company, you're probably getting it provided free or at a reduced cost by your company -- Lucky you! For those of us who are self-employed like yours truly, it's a big expense -- but necessary to protect you and your family. You especially need what's called "major medical coverage." To keep the premium cost down (and these policies can be expensive), consider a policy with a high individual and family deductible. In essence, you become self-insuring except if there is a really big megabucks type of calamity. If you get laid off from your job, the law says that your employer must continue to provide you with insurance (I believe it's up to 18 months) if you pay the premiums. While it might be tough to pay the premiums if you are out of work, if you don't have coverage and suffer a catastrophe while you're uninsured, you could lose everything.

Another kind of insurance to protect yourself is disability insurance -- both long term and short term. If you are employed by a sizeable company, you probably receive this nice benefit for free. If you're self-employed like me or your company doesn't provide it, you'll either have to provide it yourself or take the risk that you'll never need it.

Next there's life insurance. If you're getting it free from your employer -- consider yourself lucky. Make sure you have enough coverage to take care of your family for at least several years should something happen to you -- they deserve it! You can usually buy supplemental coverage through your employer at a reasonable cost. If you don't get life insurance from your employer, the cheapest type of life insurance is what's called "term insurance." Insurance agents hate it because they don't make much of a commission on it, but you can buy a lot of coverage for very little money, and sleep well at night knowing your loved ones will be taken care of.

Next, you absolutely MUST have automobile liability insurance. Not only is it the law, but it is foolish and dangerous not to have it. And don't get the minimum. With our litigious society, you had better

be well covered -- remember my pre-wedding night story? Consider an additional "umbrella" policy. It is not very expensive, and you can provide yourself with literally millions of dollars of personal liability coverage for a few hundred dollars per year. You've worked hard for what you have so far in life. Why let somebody take it all away because you were under-insured? To keep your automobile policy premium low, consider raising your deductibles on the collision and comprehensive portions -- or if you have an older car, say 10 years old or more, it might not make sense to have collision coverage. Shop around and read the issue of Consumer Reports on auto insurance.

Does all this sound like a lot of money? It is. But the alternative is to be "self-insuring." Not too many of us can afford to take that kind of risk. If you can't afford all of these types of insurance, decide what is most important for you and your family. Some coverage is better than none.

Once you have all of your policies, don't just throw them in a drawer and forget about them (what if the house burns down?). Make sure you keep them in a safe place -- a safe deposit box will do fine, but make sure you have all the contact information written down and easily located by yourself or your family in an emergency. Keep your policies up to date and review them at least yearly or when you have a major change in your life -- like getting married, buying a new house, renting a new apartment, having a new child, and so on.

Your Preparedness program is only as good as the foundation that it is built on. Build a strong foundation with adequate insurance coverage. Next time, we'll look at other elements of your Preparedness program.



N4XPE Signing "/>JA"

Dave Hyte has accepted a 24 month assignment in Tokyo Japan, and will be leaving the first part of January. While we're sure it's a tremendous career move, we're also sure Dave will be missed here. Code instructor at the class, a new VE, and a super Field Day Partner -- all lost -- but only for 24 months! **Best of luck** to you & XYL Suzy (who is awaiting her call)!

Johnston ARS Donates \$50 to RARS Controller

The following quoted from a letter dated 10/31/90:

"Vince -- The members of the Johnston Amateur Radio Society, Incorporated (JARS), appreciate the support of the Raleigh Amateur Radio Society VE team for JARSFEST 89 and JARSFEST 90.

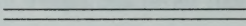
Both of these events proved to be very successful, and we are sure that the support provided by the VE team members in administering the exams was an important factor contributing to these successful events.

In appreciation of the RARS support of JARS activities, the members would like to make a contribution to the RARS repeater controller fund. Accordingly, a check in the amount of Fifty-Dollars for this purpose is enclosed.

Once again Vince, thanks seems so little for so much that you and the VE team provided.

For the JARS, 73

*Jim Creswell, KJ4SW
Jarsfest 90 Chairman*



Speaking for the RARS VEs, let me first say **thank you** to our friends in JARS for such a generous contribution. While the VEs certainly were not seeking more than the opportunity to help others, we most certainly do appreciate the verbal acknowledgement of our efforts. Your donation to the RARS Repeater Controller Fund helps support something that all of the local amateur community can enjoy. **Thank you JARS!**

*Vince Yakamavich, AA4MY
RARS VE Team Liaison*



For Sale:

Kenwood 120S HF Transceiver

With instruction manual, external 120S VFO and 120S External Speaker. VFO and Speaker may be sold separately. Contact Richard Brown, N4LBA @ 553-5839.

The RARS Challenge

This issue of the EXCITER marks the end of year #3 that yer humble servant ('ye olde editor) has been draining his brain and pecking at the keyboard for our newsletter.

This past year, the EXCITER has had **many** EXCELLENT articles written by our members. Led by **AB4EL's** outstanding series of Antenna articles, our guest authors (& folks who have graciously given me material and/or ideas) have included: "Bert", **W4FMN**; Marty, **NY4H**; Sherman, **W4TZU**; Anita, **KC4AQB**; Sonny, **WA4JWE**; Ronnie, **WA4MJF**; Sherry, **KB4EXL**; Glenn, **WA4LHE**; Chuck, **K4HF**; Paul, **K9PM**; Sage, **KC4NMS**; Denise, **N4XOY**; Virgil, **WA4OLH**; Rick, **N4VQT**; Bill, **N1BA**; Walter, **KM4BU**; Ed, **WA4PEN**; Bob, **N4VQN**; Tim, **N4IQA**; Bob, **NA4G**; Alf, **N4UOF**; Bruce, **N4UOD**; Dave, **N4XPE**; Walter, **AB4DQ**; Chuk, **KB4MDZ**; John, **N4SHX**; Lynn, **KC4NJB**; Tom, **K4ZAD**; Tom, **KM4LB**; Larry, **K4LXV**; Chris, **N4PNO**; Mike, **KN4BS**, Ken, **AB4RQ**; Edward, **N4SSU**; Pete, **W8DTD**; Bruce, **WA9NEW**; James, **KA5IEC**; & Rollin, **NF4P**.

I congratulate these fine members (and all that I forgot to mention, too!) who so graciously shared with us so that we could **all** enjoy. Not only did we enjoy, but I take great pleasure in seeing selections from our 'letter making it into the Amateur Radio News Service (ARNS) Newsletter, where they are picked up by other editors, to share in their newsletters across the country!

The challenge? Well, in line with my "brain drain" statement, I'm starting to run out of ideas folks! So here it is: **each month, I'll challenge 5 or so members**, selected at random, to tell me something. A 2 page feature article would be nice, but I'll accept anything. A phone call, a letter, a post card, anything. Subject? Anything. What they do for a living; what they'd rather be doing. What they like about RARS; what they don't like. What their interests in amateur radio are; what turns them off. What they'd like to see more of in the EXCITER; what they don't want to see. Anything they'd like to share with the membership. No holds barred.

Those responding to my challenge will be rewarded in print with praise heaped upon thy name. Those who fail to respond ... well, I have my ways! I'll have to come up with some certificates proclaiming "Officially Deemed Brain Dead", or some other such "honor" to bestow.

The RARS Challenge is extended this month to:

**Fred Brack, N4ECU
Joe White, WA4GIR
Harry Avinger, AB4T
Ben Robinson, WA4SKH
Jay Diepenbrock, KM4EP**

Respond by January 16th.

Vince Yakamavich, AA4MY

FCC Actions:

The FCC has shut down 2 pirate broadcast stations that operated on 7.435 MHz. Steven McGreevy, N6NKS of San Rafael, CA was fined \$1,000 for unlicensed operation of a station McGreevy identified as "KMUD".

In a separate case, the FCC also fined George Hopp, Jr. of Donna, TX \$1,000 for unlicensed operation on 7435 KHz using the call sign "XERK".

It appears 7435 is a popular "pirate" broadcast frequency!

W5YI Report, 11/15/90

It is with great sadness that we report the death of Cathy Whitten, daughter of Reed Whitten, AB4W, Section Manager of NC. While away at college, Cathy died in a freak auto accident. We in RARS extend our heart-felt sympathy to the Whitten family.

The family has asked that in lieu of flowers, donations may be sent to:

The Eye and Human Tissue Bank, Inc.
3195 Maplewood Ave.
Winston Salem, NC 27103

What Will Happen to YOUR Amateur Radio Equipment?

Over an individual's life span as an Amateur Radio operator, we can devote many years collecting equipment appropriate to our hobby. Then when we become a Silent Key, our spouse or other loved ones are faced with the task of disposing of the gear.

Pre-supposing that we enter the "ham fraternity" at an early age, we could devote three or four or more decades to the hobby, active in accumulating a large inventory of radio equipment and other related items. Our basements, garages and attics become storage havens for old tubes, parts, and magazines related to the hobby. Some are old and outdated and should be relegated to the trash bin, but others may have retained their value or possibly be of use to a collector.

To avoid confusion and uncertainty when that inevitable day arrives [and to prevent some unscrupulous individual from taking advantage of your loved one by "cashing in" on the situation], NOW is the time to plan for the disposition of YOUR radio equipment.

- 1) Create and maintain an inventory of equipment, showing initial purchase price & realistic, current resale values.
- 2) Designate a knowledgeable ham (or club) who can assist the family with the disposition of the equipment.
- 3) Provide written instructions if specific items of equipment are to be given to family members, friends, radio clubs, or schools.

By devoting a little time to organization, we can be of immeasurable help to our heirs, and be confident our radio collection will be handled as we would wish.

*Bill Mills, KCSPF
via AUTO-CALL, K4LMB, Editor*

New Commissioner Blasts FCC

The newest Commissioner blasted the decision making system at the FCC during an Oct. 11 speech before the Federal Communications Bar Association. Commissioner Ervin Dugan charged too much influence is given to the FCC Chairman and the balance of the Commission is expected to "rubber stamp" his positions.

Dugan said FCC policy making procedures were a "... frustrating ... top down, one option process of deliberation [and] ... a faulty process in danger of producing a faulty product." He said the Chairman's office controls what the rest of the commissioner's see and all too often asks "... not for their substantive contributions, but merely for their obedient pawprints" on FCC Orders. That remark raised a lot of eyebrows!

Dugan called for major reform of the FCC power structure. Some of his suggested changes involve permitting more than two commissioners to meet in private, restoring the independence of bureau chiefs requiring bureaus to work with all commissioners and encouraging the FCC staff to present alternative solutions.

FCC Chairman Alfred Sikes, who did not attend the luncheon address, called the Dugan remarks "... interesting and thought provoking ..." The other three commissioners who were there, however, seemed to agree with Dugan.

More than 100 FCC decisions are currently pending in federal appeals courts around the country. Some critics claim the FCC is overly driven by ideology and political dogma. Others believe any FCC shortcomings are attributable to inadequate funding, rapidly changing technology, and outdated laws.

*W5YI Report
11/15/90*

[Ed Comment: Any more, I really have to wonder what goes on up in Washington. Used to be, after receiving petitions, the FCC would issue a NPRM (Notice of Proposed Rule Making), and then wait for and evaluate public input, and then make a ruling. That seemed to be a fair and equitable manner of

handling things. On the Handicapped Amateur Code Waiver issue, for example, under executive (political?) influence, they set policy first, and **then** opened the issue to public comment, and a surprisingly brief period for comment, at that. Making matters worse, these events surround an issue that only 8 years ago was specifically deemed "not sound licensing policy" by the very same FCC. "Holy reversal, Batman!"

.....

Prefix Mania

Having nothing better to do one rainy Sunday afternoon, I asked my computer to sort the RARS roster by call sign prefix. I was surprized to see calls from all 10 US call districts, not to mention a whole slew of different prefixes. Within RARS, we have:

AAs from 4 & 6 land
 ABs from 4 land
 Ks from 1,2,3,4,8,& 9 land
 KAs from 1,2,3,4,5,8, & 9 land
 KBs from 2,4, & 7 land
 KCs from 2, 4, & 9 land
 KEs, KFs, KIs, KJs, KKs, KMs, KNs from 4 land
 a KU from 3 land
 a KX and a KY from 4 land
 Ns from 0,1,2,3,4,5,6, & 9 land
 NA and NF from 4 land
 one very distinctive NO0
 an NU and one NX from 9 land
 a single NY from 4 land
 Ws from 1,2,3,4,6,7, & 8 land
 WAs from 0,1,2,3,4 & 9 land
 WBs from 2,4,5,6,8, & 9 land
 WDs from 2 & 4 land
 and a single WK from 2 land

Don't ask me what good this info is -- but personally, I'm gunna try and recruit some N7s and N8s just to complete the list. And if I can find a KH6 and a KL7 station in Raleigh, I'll try to sign them up too!!

73, AA4MY

NC / SC / VA Hamfest Calendar

Dec. 1990 None!
 Jan 19 Greenwood, SC. Info: Jack 803-299-3176 & Earl, 803-223-4436 TI 147.765/165
 Jan 20 **Richmond VA Frostfest.** New Location: The Showplace, 3000 Mechanicsville Tpk., Richmond. Tickets & Res: Mark, WA4DHY, 804-747-0227. Other info: Bill, AB3P, 804-745-5822. Deadline for pre-reg & reserved tables 12/29/90! TI 146.28/88
 Feb 17 Elkin, NC
 Feb 23 Charlestown, SC
 Feb 24 Vienna, VA
 Mar 09 & 10 **Charlotte, NC** Pre-Reg & tables: 704-536-7373
 Apr 6 Chesapeake, VA
 Apr 14 **Raleigh, NC**
 Apr 26 - 28 Dayton, OH
 May 4 & 5 Greenville, SC
 May 18 Roanoke, VA
 May 25 **Durham, NC**
 Jun 2 Manassas, VA
 Jun 8 Winston-Salem, NC
 Jul 20 **Cary, NC**
 Jul 27 & 28 Asheville, NC
 Aug 4 Berryville, VA
 Aug 10 & 11 High Point, NC
 Aug 31 & 1 Shelby, NC
 Sep 14 & 15 **Virginia Beach, VA**
 Sep 21 Spruce Pine, NC
 Sep 29 **JARS - Benson, NC**
 Oct 6 Rock Hill, SC
 Oct 13 Maysville, NC
 Oct 19 TEARA - Smithfield, NC
 Oct 26 Sumter, SC
 Nov 10 Concord, NC
 Nov 23 & 24 Greensboro, NC

(Compiled from SERA Journal 11/90. Be aware that sometimes, dates change. Especially on the 'fests listed in the latter part of '91, before you drive, call and make sure!! ... caveat emptor!)

Pacemakers & Ham Radio

Fran Litke, KB4ZUQ

In the hospital, the first thing that they handed me as a prospective pacemaker recipient was a copy of "You have a pacemaker," by B. Fletcher and J. Purcell.

One of the very first things that caught my eye was a paragraph headed "**DO NOT BUY A HAM RADIO.**" It continued, "The signal of a ham radio can confuse your pacemaker. Do not buy or go near a Ham Radio."

Humm, said I, this needs some investigation. The Doctors seemed somewhat taken aback when questioned, but they said they'd "look into it." They came back with a vehemently stated line something to the effect of "... no hobby should be an issue where the need of a pacemaker is indicated." Well, let's ask the experts.

When asked, the ARRL said, "... there is one case where allegations of interference to a *neighbor's* pacemaker has been made." "We have no evidence of any danger."

Next, we contacted the King & Founding Father of pacemaker technology, Medtronic of Minneapolis MN. They had this to say: "... if the equipment used is within FCC specs, and has not been altered, the equipment should have no adverse effects."

The pacemaker wearer should not work on or repair antennas while in the transmit mode. (!) And when operating a radio, the pacemaker wearer should be from 25 to 50 feet from the antenna.

At this point I would like to mention that a club member sent me a terrific article "Keeping Pace with Pacemakers". If anyone knows of a potential PM user, I will happily send or give them a copy of this article. It has a very good explanation of the how, when, where, and why these implants work.

Finally, I turned to one of our own, Josef Darmento, W4SXX. He addresses the article by Paul Brodeur on the dangers from electromagnetic fields: Brodeur is a writer of sensational articles which belong more fittingly in the Enquirer! In 1978 his "Zapping of America" achieved some notoriety and evoked comments

from Jim Fisk, editor of Ham Radio Magazine. Fisk said "Much of Brodeur's book is devoted to the 'deadly use of microwave radiation' ... he apparently doesn't know the difference between high power radars or TV transmitters and HF amateur equipment, and claims a "cover-up" by the government.

That last overstatement got my goat! As far back as 15 years previously, I had been Civilian Chief of Radiation Hazards & Measurements group for the Air Force in Europe. I felt I had to put in my 2 cents worth, which Ham Radio published verbatim. My group had 15 contract engineers and about 16 GI surveyors checking RADAR siting, orientation and power density at various distances. The accepted level for continuous exposure had been established years before at 10 milliwatts per square centimeter (this is the current OSHA level today)."

How does this relate to Amateurs? Well, most equipment today is shielded in metal, and uses coax feedline, so the only real danger is from the antenna. With the max legal limit of 1 KW average into a beam with 6 - 10 dB gain, which concentrates RF within a 60 degree sector in front. Measurements made at 10 meters in front of such a beam show a density approximately one tenth of the accepted level quoted above. I don't think anyone is going to sit in front of their beams while transmitting.

However, amateurs who operate at UHF and above, and especially those playing with X-Band equipment are at a real risk, even though this is mitigated because most equipment produces only a few milliwatts. We've all been living with microwave ovens the last 10 years, and have read manufacturers warnings, but that's another story entirely.

What about 60 cycle radiation? We're surrounded by it! Now, any wire carrying current has both an electric and a magnetic field. At 60 cycles the electric field is pretty well confined to the conductor. The magnetic field reaches further out, since in many cases, large currents are drawn, started and stopped. All of us are made of atoms, of course, we all have a beautiful oscillator which triggers the heart to beat 70 or so times per minute during our lifetime. Since an atom can and may be acted upon by an external magnetic field, it has occurred that such fields may interact with certain bodily functions specifically that they could

interfere with cell production, a special concern during pregnancy, but nothing so far has produced any cause or effect proof.

An excellent article in the Science section of the NY Times quoted a dozen scientific reports and ended saying that virtually no one who has studied the problem believes that what ever risk may be posed by 60 cycles is anywhere near the risk posed by cigarettes, asbestos, or auto accidents. No one is advocating the rewiring of America. So much for Brodeur.

I hope that this researched article sets to rest the Ham Radio vs. Pacemaker question.

*Platinum Coast (FL) ARS Newsletter, 9/90
KB4ZUQ & K1JOY Editors*

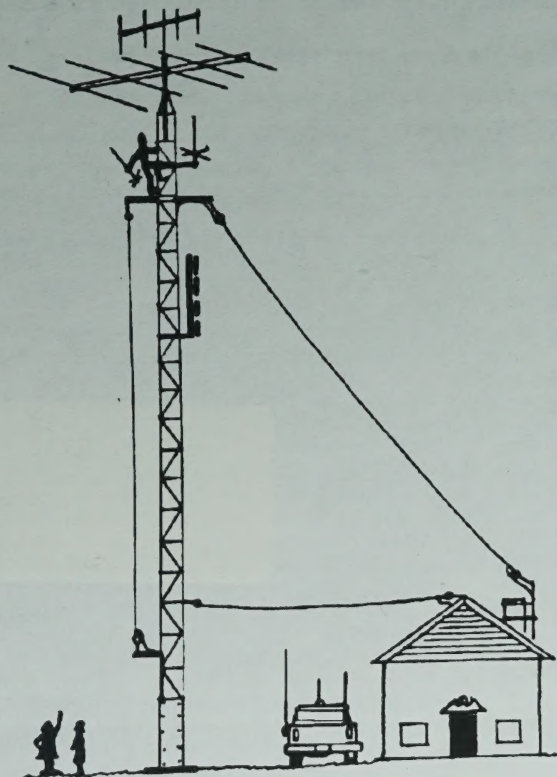
Wanted: CW Ops

Paul Mueller, K9PM, advises he is looking for good CW ops (perhaps with access to a lap-top computer??) willing to be part of the 1991 RARS "Blood & Guts" Field Day effort. (Field Day '91 is on the 29th & 30th of June -- and it's not too early to start planning!) Once again the contest guys are hoping to go QRP (5 watts or less) with BIG antennas. There may even be 2 QRP "blood & guts" efforts ... one phone and one CW. Anyone interested on getting in on these contest efforts, get a hold of Paul @ 851-4577.

For Sale:
Regency BTL 304
6 meter FM Xcvr

4 channel, xtal controlled, includes mic & 12v power cord. Crystalled for 52.525 (national simplex freq), 53.03 (will be RARS 6m rpttr freq), and 3 other xtal pairs. Call 781-5747 after 6:00 PM.

Rob Ingraham, AB4FY



**"Honest Marge ...
there are times I'd give anything
for him to chase women or drink!!"**

*Tnx to: Dave Tuttle, KB4OKB
& the Durham FM Assn. LINK
N4SHX, Editor*

Custom Computer

PC Sales, Service, and Consulting
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Your Total Solution

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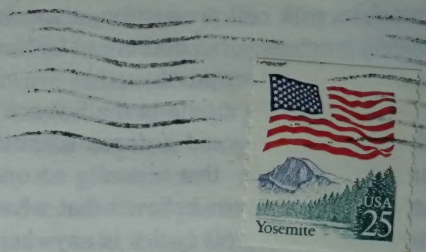
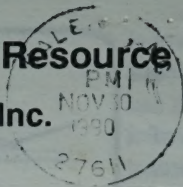
138 Mine Lake Ct. Raleigh, N.C. 27615 (919) 870-1044

Amateur Radio -- A National Resource

Raleigh Amateur Radio Society, Inc.

P.O. Box 17124

Raleigh, NC 27619



THE LITTLEWOOD FAMILY
2005 QUAIL RIDGE ROAD
RALEIGH

K4HF

NC 27609

Next Regular RARS Meeting: Wednesday, December 5, 7:30 PM

Raleigh YMCA , 1601 Hillsborough St.

RARS Nets: Daily @ 8:00 PM on 146.04/64

10 Meter - Tuesdays, 7:00 PM on 28.364 MHz

YL Info Net - Wednesdays, 9:30 PM, 04/64

Technical Information Net - Saturdays, 8:30 PM, 04/64

RARS Computer Bulletin Board: 781-2530

Events Calendar

- Dec 05** RARS Monthly Meeting with Amateur Exams Info: AA4MY, 847-8512
- Dec 08** RARS Christmas Party. Home of Chuck (K4HF) & Mary Jo Littlewood, 2005 Quail Ridge Rd., between Spring Forest & Falls of Neuse Roads. Talk In - 04/64. Info: Anita, 846-7455 & Inside!!
- Dec 08 & 09** ARRL 10 Meter Contest
- Dec 12** Homebrew SIG Meeting, KM4BU's abode, 7:30 PM. Talk In 04/64
- Dec 13** RARS VHF/UHF SIG Meeting Info: WA4MJF, 266-4434
- Dec 19** RARS Advisory Board Meeting, 7:00 PM YMCA. All members welcome.
- Dec 25** Merry Christmas!
- Jan 01** Happy New Year! ARRL Straight Key Night
- Jan 02** Regular RARS Meeting

